

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-127. (Canceled).

128. (Previously Presented) A breathable gas mask arrangement comprising:
a mask shell having a portion adapted to receive a supply of pressurized breathable gas and a user side;

a gusset portion having a first side attached to the user side of the shell and having a second side;

a cushion having a first portion attached to the second side of the gusset portion and a second portion constructed and arranged to contact a user's face in use and provide a seal between the mask arrangement and the user's face; and

headgear constructed and arranged to attach the mask shell to the user;

wherein:

the gusset portion includes a gusset having a flexible sidewall, and

a maximum width of the gusset portion over an operating pressure range is greater than a width of the mask shell.

129. (Previously Presented) A breathable gas mask arrangement as claimed in claim 128, wherein the gusset portion defines a projected area that is variable in a radial direction according to 1) a distance between the mask shell and the cushion and/or 2) a pressure of the breathable gas over an operating pressure range.

130. (Previously Presented) A breathable gas mask arrangement as claimed in claim 128, wherein the gusset portion comprises an elastic spring constant that is variable in accordance with (1) a pressure of the breathable gas over an operating pressure range and/or (2) a distance between the mask shell and the cushion.

131. (Canceled).

132. (Previously Presented) A breathable gas mask arrangement comprising:
a mask shell having a portion adapted to receive a supply of pressurized breathable gas and a user side;

a gusset portion having a first side attached to the user side of the shell and having a second side;

a cushion having a first portion attached to the second side of the gusset portion and a second portion constructed and arranged to contact a user's face in use and provide a seal between the mask arrangement and the user's face; and

headgear constructed and arranged to attach the mask shell to the user;

wherein:

the gusset portion includes a gusset having a flexible sidewall, and

the cushion is directly attached to an elastic sidewall of the gusset portion.

133. (Previously Presented) A breathable gas mask arrangement comprising:

a mask shell having a portion adapted to receive a supply of pressurized breathable gas and a user side;

a gusset portion having a first side attached to the user side of the shell and having a second side;

a cushion having a first portion attached to the second side of the gusset portion and a second portion constructed and arranged to contact a user's face in use and provide a seal between the mask arrangement and the user's face; and

headgear constructed and arranged to attach the mask shell to the user;

wherein:

the gusset portion includes a gusset having a flexible sidewall, and
an elastic sidewall of the gusset portion extends outward from the cushion.

134. (Previously Presented) A breathable gas mask arrangement comprising:

a mask shell having a portion adapted to receive a supply of pressurized breathable gas and a user side;

a gusset portion having a first side attached to the user side of the shell and having a second side;

a cushion having a first portion attached to the second side of the gusset portion and a second portion constructed and arranged to contact a user's face in use and provide a seal between the mask arrangement and the user's face; and

headgear constructed and arranged to attach the mask shell to the user;

wherein:

the gusset portion includes a gusset having a flexible sidewall, and

a component of contact force F_c provided by the supply of pressurized breathable gas acting on the gusset portion is sufficient to maintain the seal between the mask arrangement and the user's face without adjusting strap tension.

135. (Previously Presented) A breathable gas mask arrangement as claimed in claim 134, wherein the strap tension upon initial set up of the mask arrangement does not exceed a value sufficient to bring the cushion in contact with the user's face.

136. (Currently Amended) A breathable gas mask arrangement comprising:
a mask shell having a portion adapted to receive a supply of pressurized breathable gas and a user side;

a gusset portion having a first side attached to the user side of the shell and having a second side;

a cushion having a first portion attached to the second side of the gusset portion and a second portion constructed and arranged to contact a user's face in use and provide a seal between the mask arrangement and the user's face; and

headgear constructed and arranged to attach the mask shell to the user;

wherein:

the gusset portion includes a gusset having a flexible sidewall, and

the gusset portion consists essentially of ~~the~~ a single gusset.

137. (Currently Amended) A breathable gas mask arrangement, comprising:

a mask shell having a portion adapted to receive a supply of pressurized breathable gas and a user side;

a gusset portion having a first side attached to the user side of the shell and having a second side;

a cushion having a first portion attached to the second side of the gusset portion and a second portion constructed and arranged to contact a user's face in use and provide a seal between the mask arrangement and the user's face; [and]

wherein:

a distance between the mask shell and the cushion is variable, and

~~the gusset portion defines a projected area on the user's face that is variable in dependence on the distance between the mask shell and the cushion~~
the cushion is directly attached to an elastic sidewall of the gusset portion.

138. (Previously Presented) A breathable gas mask arrangement as claimed in claim 137, wherein the projected area is variable in a radial direction according to a pressure of the supplied breathable gas over an operating pressure range.

139. (Previously Presented) A breathable gas mask arrangement as claimed in claim 137, wherein the gusset portion comprises an elastic spring constant that varies according to (1) a pressure of the supplied breathable gas over an operating pressure range and/or (2) the distance between the shell and the cushion.

140. (Currently Amended) A breathable gas mask arrangement, comprising:

a mask shell having a portion adapted to receive a supply of pressurized breathable gas
and a user side;

a gusset portion having a first side attached to the user side of the shell and having a
second side;

a cushion having a first portion attached to the second side of the gusset portion and a
second portion constructed and arranged to contact a user's face in use and provide a seal
between the mask arrangement and the user's face;

wherein:

a distance between the mask shell and the cushion is variable, and

A breathable gas mask arrangement as claimed in claim 137, wherein a maximum width
of the gusset portion over an operating pressure range is greater than a width of the mask shell.

141. (Canceled).

142. (Currently Amended) A breathable gas mask arrangement, comprising:

a mask shell having a portion adapted to receive a supply of pressurized breathable gas
and a user side;

a gusset portion having a first side attached to the user side of the shell and having a
second side;

a cushion having a first portion attached to the second side of the gusset portion and a
second portion constructed and arranged to contact a user's face in use and provide a seal
between the mask arrangement and the user's face;

wherein:

a distance between the mask shell and the cushion is variable, and

~~A breathable gas mask arrangement as claimed in claim 137, wherein an elastic sidewall~~
of the gusset portion extends outward from the cushion.

143. (Previously Presented) A breathable gas mask arrangement as claimed in claim 137, further comprising headgear constructed to support the shell to the user, said headgear including at least one strap.

144. (Previously Presented) A breathable gas mask arrangement as claimed in claim 143, wherein a component of contact force F_c provided by the supply of pressurized breathable gas acting on the projected area is sufficient to maintain the seal between the mask arrangement and the user's face without adjusting strap tension.

145. (Previously Presented) A breathable gas mask arrangement as claimed in claim 144, wherein the strap tension upon initial set up of the mask arrangement does not exceed a value sufficient to bring the cushion in contact with the user's face.

146. (Previously Presented) A breathable gas mask arrangement as claimed in claim 137, wherein the gusset portion consists essentially of a single gusset.

147. (New) A breathable gas mask arrangement as claimed in claim 137, wherein the gusset portion defines a projected area on the user's face in use that is variable in dependence on the distance between the mask shell and the cushion.

148. (New) A breathable gas mask arrangement as claimed in claim 140, wherein the gusset portion defines a projected area on the user's face in use that is variable in dependence on the distance between the mask shell and the cushion.

149. (New) A breathable gas mask arrangement as claimed in claim 142, wherein the gusset portion defines a projected area on the user's face in use that is variable in dependence on the distance between the mask shell and the cushion.